

In the March 8 response, Applicants presented new arguments in response to the Office's rejections, as well as provided expanded discussion of arguments made in prior responses. For example, Applicants made an argument relative to the withdrawal of the "final" status of the Office Action as set forth under section heading III, beginning on page 2 of the Applicants' March 8 response. Relative to the Office's discussion as to what Figs. 1 and 2 of Applicants' disclosed prior art show, Applicants provided a new argument that these references do not disclose substantially all of the features claimed in claim 1. Applicants further expounded on its discussion as to what the Jeanneret reference (U.S. Patent No. 5,408,169) discloses under section heading IV beginning on page 4 of the March 8 response.

With respect to the rejections based on the Takaoka et al. reference (U.S. Patent No. 5,094,703), Applicants provided expanded discussion of the advantage provided by the present invention of reducing eddy current development in a cable winding (on page 6 of the March 8 response), whereas the Takaoka et al. reference discussed the benefit of reducing skin effect in a conventional low voltage transmission and distribution device. Applicants further discussed, on pages 6-7, the differences between the insulated and uninsulated strands in the Takaoka et al. reference and present invention. Takaoka et al. employs its arrangement to reduce skin effect in the cable, and the present invention utilizes its configuration to confine the electric field within the cable. Further arguments are made relating to this reference on pages 12-13 of the March 8 response, wherein Applicants discuss the fact that because the present invention operates at high voltage, there is less current flowing through the winding, as opposed to the Takaoka et al. reference where the device operates in high current applications. The advantage of the present invention is that there are less forces and stresses acting on the winding. Applicants also expanded on their arguments pertaining to the Breitenbach et al. reference (U.S. Patent No. 4,785,138) on pages 7-8, wherein Applicants discuss the issues related to Eddy currents and the fact that Breitenbach et al. deals with the unrelated art of linear motors and not a winding in a high voltage electric field.

Applicants respectfully contend that the Office has not provided a detailed response to the new arguments, and are left to conclude that the Office has failed to take these new and expanded arguments into account. On pages 10-11, Applicants discuss the argument that Elton et al. does not effectively control the electric field in the end-winding region of a cable winding, more specifically the fact that Elton et al. does not teach both internal and external

semi-conductive layers in machine windings. Applicants also presented, on page 11, the argument that the cable disclosed in Elton et al. is brittle and inflexible, and would, therefore, be ineffective if used as a winding. The inflexibility of the cable would prevent it from being wound around a core, and would also crack when attempted to be wound, thereby promoting the development of corona discharge.

Lastly, Applicants unsuccessfully presented a request on page 14 of the March 8 response asking the Office to point out where the Jeanneret reference discloses “a rotating asynchronous converter employing a high voltage electric machine comprising a stator, rotor, and a winding, wherein at least one of said winding comprises a cable including at least one current carrying conductor and a magnetically permeable, electric field confining over surrounding the conductor, said cable forming at least one uninterrupted turn in the corresponding winding of said machine.”

Upon receipt and review of the June 12, 2001 Final Office Action, Applicants discovered that the Office Action was a virtual carbon copy of the Final Office Action dated September 8, 2000 (Paper No. 16) with absolutely no discussion of Applicants’ response that encompassed new arguments, some of which are set forth above, relating to the pending rejections. In fact, only four sentences were added to the September 8, 2000 Office Action which was then re-issued as the most recent Final Office Action. The added text consisted of:

[a]s of 11 May 2001, applicants have filed a request for continuing patent application. All prior issues remain as responded to in the final office action (paper #16) and the advisory thereafter (paper #22). Therefore this action is made final. For convenience, the previous final has been recited.

As can be seen, none of the added text addressed Applicants’ new arguments. Applicants also acknowledge receipt of the Advisory Actions dated April 4, 2001 (Paper No. 22) and December 31, 2001; however, Applicants respectfully submit that they are likewise not a sufficient response to Applicants’ new arguments. Applicants believe that they are entitled to a more detailed response that addresses their arguments not previously offered or considered by the Office.

In addition, the Elton ‘565 patent references Elton ‘077, which discusses Elton’s process for making the pyrolyzed glass material. The method described in Elton yields the

result of a stiff cable not capable of bending when cured. This is not surprising since the cable, a power cable, in Elton is for use in long, stretched out runs, where there are no bends therein. This is relevant because the cable shown in Elton cannot be manufactured in a coiled configuration for use in a stator, or in a storage device that requires coil windings that are formed with one turn on top of another. As described below, there is no way to make the cable of Elton in a bent or coiled configuration having a pyrolyzed outer layer without damaging the inner pyrolyzed layer. The pyrolyzed glass material needs to be cured. Once it is cured, the material becomes stiff. If bent after becoming stiff, the material cracks and develops voids, which would give rise to a cable failure if exposed to a high voltage stress. While it is possible to cure the outer layer of the cable after it is coiled, the insulation structure actually has an inner layer of semiconducting material as well. Consider that the pyrolyzed inner semiconducting layer cannot be cured after it has been encased with the insulation layer/outer pyrolyzed layer. Moreover, if the inner layer is cured before the insulation and outer layer are applied, then there is no way to later bend and form the Elton cable in a "compact" coiled configuration for use in a rotating electric machine, a power transformer or a compact magnetic energy storage module without cracks/voids, as described above. Consequently, the outstanding Office Action has not presented a prima facie case of obviousness.

Pursuant to 37 C.F.R. § 1.104(2), when examining an application, "[t]he reasons for any adverse action or any objection or requirement will be stated in an Office action and such information or references will be given as may be useful in aiding the applicant." Applicants respectfully submit that this requires the Office to give Applicants a more thorough explanation for the rejection of its arguments. Contrary to the regulation cited above, Applicants respectfully submit that the Office has failed to state any reasons or helpful information with regard to the new arguments offered.

Furthermore, Applicants respectfully submit that they are entitled to a more in-depth examination of its new arguments at least in light of the fact that a request for continued application was filed. The Office has made no attempt to evaluate and consider Applicants new arguments, and Applicants respectfully submit that this is improper. Applicants respectfully submit that the foregoing constitutes a bona fide effort to advance prosecution on

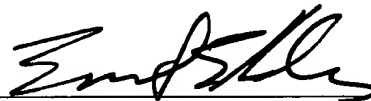
the merits. Particularly there are no new positions taken by the Office to respond to in view of Applicants' new and expanded arguments.

Accordingly, Applicants hereby respectfully request that the Office reconsider its prior Office Actions and Advisory Actions, and issue a new Office Action addressing the new arguments made in the Office Action responses dated March 8, 2001 and December 31, 2001.

Respectfully submitted,

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